

- (21) Application No. 22526/72 (22) Filed 12 May 1972 (19)
(31) Convention Application No. 7 117 079 (32) Filed 12 May 1971 in
(33) France (FR)
(44) Complete Specification published 7 May 1975
(51) INT. CL.² B65D 19/40
(52) Index at acceptance
B8H 26



(54) COMPOSITE WOOD AND METAL FORK-LIFT PALLET

(71) We, ROGER SEBILLEAU, a French citizen of "Kerheol" Avessac, (Loire Atlantique) France, and KURT INGVAR EKLUND, a Swedish citizen, of 24, rue de la Guichardais, Redon (Ille et Vilaine), France, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

The present invention relates to a composite wood and metal fork-lift pallet comprising two wooden platforms interconnected by three parallel metal cross beams, of which one extends along the middle of the pallet and the others are disposed near respective edges thereof to thereby define support areas for the pallet such that the two arms of the fork of a fork-lift truck, used for handling the pallet, engage the undersides of the cross beams.

When, for the purpose of handling these pallets, use is made of fork-lift trucks having a fork sufficiently long to engage the three cross beams of the pallet simultaneously, the pallet is perfectly stabilized and there is then no problem. On the other hand, if the fork is shorter and engages only two of the cross beams, there is danger that the pallet and its load will rock about the middle cross beam which acts as a pivot, and this might result in serious accidents. It follows that it is always necessary to use fork-lift trucks having a long fork when handling such pallets.

The main object of the present invention is to overcome this drawback and, for this purpose, the invention provides a fork-lift pallet, comprising a first platform for supporting goods to be carried, and a second platform parallel to and spaced from the first, said platforms being interconnected by two first metal crossbeams disposed in parallel near respective edges of the pallet and a second metal cross beam extending in parallel with the first cross beams along the middle of the pallet, each of said cross beams comprising an elongate member at-

tached to said first platform and a plurality of spacer pieces attached to the second platform, said spacer pieces being provided at spaced intervals along the elongate member so as to define areas inbetween for receiving the forks of a fork-lift truck, and wherein said second cross beam comprises two separate elements positioned one on each side of that median axis of the pallet which is parallel to the cross beams, the arrangement being such that, during use, the forks bear against said second metal cross beam and at least one of said first metal cross beams.

It will be readily appreciated that the risk of the pallet rocking can be reduced, even if a fork-lift truck having a short fork is used for handling it. In fact, as a result of the arrangement in accordance with the invention, the point at which the end of the fork is applied is automatically moved forward well beyond the centre of gravity of the pallet. It will also be seen that this pallet requires no more metal than does a conventional pallet, and that it is therefore no more expensive, whilst at the same time it is just as strong, if not stronger.

Said second cross beam is preferably constituted by two metal cross beams of the same type as said first cross beams.

Thus a single standard basic element can be used for forming all the cross beams of the pallet and this results in a greater production rate and thus in a lower production cost.

An embodiment of the invention will now be described by way of example with reference to the accompanying drawing, in which:

Figure 1 is a simplified perspective view of a pallet in accordance with the invention;
Figure 2 is a side view of this pallet; and
Figure 3 is a section on the line III—III of Figure 2.

The pallet illustrated in the figures is mainly formed by an upper platform 1 and a lower platform 2 which are interconnected by three metal cross beams arranged parallel

to each other and comprising a middle cross beam 3 and two side cross beams 4. In this embodiment the upper platform comprises seven wood planks in substantially abutting relationship, whereas the lower platform 2 comprises in the conventional manner only three parallel wood planks spaced from each other. The cross beams 3 and 4 define support areas for the pallet and enable the pallet to be handled by fork-lift trucks fitted with forks which rest on the ground by means of wheels.

The middle cross beam 3 is constituted by two elements in the form of cross beams 5 which are of the same type as the cross-beams 4 and are arranged close to, but on opposite sides of the median axis of the pallet, for a reason which will appear later. The use of two similar cross beams 5 of the same type as those forming the cross beams 4 is for the purpose of simplification and standardisation in manufacture. However, depending upon the load that the pallet has to carry, a cross beam 5 could be added at each end of the pallet so as to form a cross beam similar to cross beam 3.

In the particular embodiment here described, the cross beam 5 is constituted by a beam 6 which supports the upper platform 1 and to which are attached at 7, by welding, three uniformly spaced pieces 8 for supporting the three planks of the lower platform 2. It should, however, be stated that the cross beam 5 could also be formed as a single piece if required. The cross beams are bent to a shape which will offer greater resistance to compression.

The platforms 1 and 2 are secured to the cross beams 5 by a known wood-to-metal connecting method, in which use is made of curved tongues punched out from the angled marginal portions of the cross beams 5. These metal tongues are then forced by means of a press into the thickness of the wood forming the platforms, so that excellent cohesion of the pallet assembly is achieved.

The pallets of the kind described are designed to be handled by means of fork-lift trucks fitted with forks, the two arms of which bear against the lower portion of the beams 6, between the pieces 8. Generally, these forks are sufficiently long to bear simultaneously against the two beams 4, so that no problem arises since the pallet is then perfectly stable.

However, there also exist trucks that are equipped with shorter forks as shown at 9 in Figures 2 and 3. It will be seen that in this case the two arms of the fork cannot bear simultaneously against the two cross beams 4. Nevertheless, the pallet remains perfectly balanced due to the fact that the two cross beams 5 forming the middle cross beam 3 are spaced sufficiently far apart from each other so that the point of application of the end of the fork is thus moved beyond the centre of gravity of the pallet.

The pallets of the invention thus enable trucks having either long or short forks to be used, without any risk of rocking of the pallet which always remains perfectly stable.

WHAT WE CLAIM IS:—

1. A fork-lift pallet, comprising a first platform for supporting goods to be carried, and a second platform parallel to and spaced from the first, said platforms being interconnected by two first metal crossbeams disposed in parallel near respective edges of the pallet and a second metal cross beam extending in parallel with the first cross beams along the middle of the pallet, each of said cross beams comprising an elongate member attached to said first platform and a plurality of spacer pieces attached to the second platform, said spacer pieces being provided at spaced intervals along the elongate member so as to define areas in-between for receiving the forks of a fork-lift truck, and wherein said second cross beam comprises two separate elements positioned one on each side of that median axis of the pallet which is parallel to the cross beams, the arrangement being such that, during use, the forks bear against said second metal cross beam and at least one of said first metal cross beams.

2. A pallet according to claim 1 wherein each element of the second cross beam comprises a metal cross beam of the same type as said first cross beam.

3. A fork-like pallet substantially as herein described with reference to the accompanying drawing.

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Fig-1

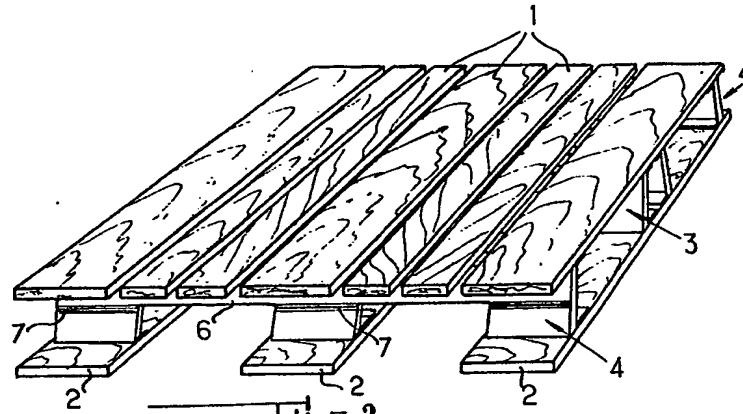


Fig-2

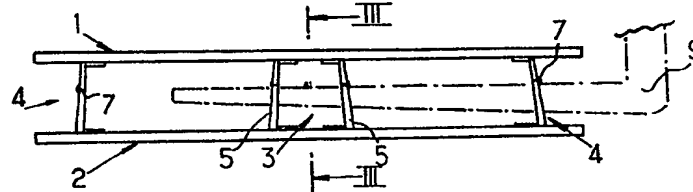


Fig-3

